

AMENDMENTS TO THE SPECIFICATION

Please amend the specification as noted in the following paragraph from page 5, line 7 to page 6, line 17, at three locations:

Considering potential environmental benefits, the process could be used to rapidly dissolve high volumes of salt into a saturated saline solution and to disperse the same at known concentrations. This could have a substantial impact on the Ocean Thermohaline Circulation (OTC), the Earth's natural "heat pump". It is known that deep water circulation is created by heavy or salt water sinking in the North Atlantic regions where ~~is it~~ can sink to some 6000 metres and take up to 2000 years to circulate through the Pacific and back up to the ~~Artic~~ Arctic. The warm waters from the south flow north in this Atlantic conveyor belt to replace the heavy sinking salty waters. There is a considerable amount of evidence accumulating worldwide that the effects of global warming has very strong potential to assist in the stopping of the OTC. This would have catastrophic effects on Europe and North America, creating substantial decreases in temperature and potentially destroying the ability to grow crops. Temperatures in the UK and continental Europe are elevated by the Gulf Stream, a warm Atlantic Ocean current that carries as much water as the Amazon River. Down-welling of heavy water is one process driving the Gulf Stream. Surprisingly this rapid sinking occurs principally in two quite small areas of the North Atlantic, one near Labrador and one in the Greenland sea, where the warm waters are chilled by icy winds from nearby glaciers. Collective processes push dense, salty water towards the ocean depths and other Atlantic areas, down-welling is governed by the salt (haline) content and the heat content of the waters in these areas; hence it is called the Thermohaline circulation (THC). Should either of the two collective pumps weaken or shut off, average temperatures in the UK and continental Europe could plummet and no current models can accurately determine whether this would happen over a short or drastically quick time. There is considerable detail available from ice cores of this happening in the past. Man-made global warming and excessive CO₂ in the atmosphere has clearly indicated several

areas of weather change, such ~~at as~~ El Nino becoming more extreme each year, excessive rainfall and flooding and increasing large numbers of icebergs each year being counted by the North American authorities.

Please amend the specification as noted in the following paragraph from page 16, lines 1-10, at one location:

The process can be described as a high throughput low size reactor within the confines of a large vessel which can subject each particle in the zone of influence of the vortex to the reaction described above prior to discharging the solids and saturated solution from the vessel. This ~~may be~~ may be due to the mass transfer happening within the vortex and the fluidising unit creating the vortex, which is also in close proximity to the discharge pipe exiting the vessel, where the greatest Delta P will be evident.